Technical Specification for L.T. PVC Insulated Single Core Aluminium Lead Wire (Multi Strand).

1. The PVC Aluminium lead wire (multi strand) shall be of 1,100 volts grade and shall be single core. The cable shall be supplied in coils of 100 Mtrs. Length.

2. The lead wire (multi strand) shall be manufactured, tested and supplied as per IS-694 of 1990 with latest amendments if any.

3. The conductors shall be composed of Aluminium wires complying with IS-8130 of 1984 with latest amendments, if any. The conductor particulars shall be as noted below.

Note: The conductor shall satisfy the requirement of resistance as per IS-8130 and also the nominal cross section specified below:

Sl. no	Cable	Conductor	Weight of Aluminium in kgs/100m	Remarks
1.	50Sq. mm	19/1.83mm	14.40	Un Sheathed
2	70 Sq.mm	19/2.17mm	20.17	Un Sheathed
3	95 Sq mm	19/2.52mm	27.40	Un Sheathed
4	120 Sq mm	37/2.03mm	34.58	Un Sheathed
5	150 Sq mm	37/2.27mm	43.22	Un Sheathed
6	185.0 Sq .mm	37/2.52 mm	53.30	Un Sheathed
7	240.0 Sq .mm	37/2.85 mm	70.30	Un Sheathed

(The weights of Aluminium conductor given above are as per IEEMA circular)

4. The conductor shall be provided with PVC insulation applied by extrusion and the PVC compound shall be type 'A' of IS5831 of 1984 with latest amendments, if any.

5. The colour of the cable and sheath shall be Black.

6. **Packing & Marking**:

6.1 The Marking shall be as per IS: 694 OF 1990 with the following details;

A **On the Lead Wire:**

i) Reference of Indian Standard IS 694;

ii) Manufacturer's name, Brand name or Trade-Mark;

iii) The letter **"BESCOM".**

iv) Year of manufacture

v) Type of cable and Voltage Grade;
vi) Nominal cross sectional area of conductor;
vii) Cable code;
viii) Colour of core;
ix) The word ‘suitable for outdoor use’ ;

The printing, indentation or embossing shall be done on the insulation,. The distance between any two consecutive printings, indentations or embossing shall be not more than 1m.

B **<u>On the Drum/ Reel:</u>**

i) Length of the cable on the reel, drum or coil;
ii) Direction of rotation of drum (by means of arrow);
iii) Approximate Gross Weight in kgs;
iv) Year of manufacture;
v) Purchase Order reference and Date.

6.2 The packing of the cable reel or drum shall also be marked with the standard markings and BESCOM Purchase order reference.

7. Test Certificates:-

a) All the type test certificates stipulated in IS 694 of 1990 with latest Amendments, if any shall be produced for verification and approval.
b) In case of an order, all the acceptance tests stipulated in IS 694 shall be conducted in presence of BESCOM representative.
c) Routine tests shall be conducted and test reports in the form of test certificates signed by a responsible officer of the firm shall be submitted to this office for approval before dispatch of the material.

General Manager Ele,
Procurement,
BESCOM